Withers, David Ian, 2003. A Resurvey for the Royal Snail (*Marstonia ogmorhaphe*). Final Report. Revenue Grant #1448-40181-02-G-050. Tennessee Division of Natural Heritage, Nashville, 63 pp.

Introduction and Summary

The royal snail (*Marstonia ogmorhaphe* Thompson) is a small (5 mm total length) Hydrobiid snail, known from only two populations in Marion County, TN. The population from the type locality (Owen Spring, Sequatchie) occurs primarily on public land (Sequatchie Cave Park) that receives high visitation by the public. The other population (Blue Hole Spring & Town Creek, Jasper) occurs in a reach of Town Creek that is primarily on private property. Most of this land is in agricultural use. These two populations are only four miles from one another, and both are susceptible to several threats that could significantly impair recovery of this species (Withers, 2000).

Because of the extremely limited distribution of the species, and potential for habitat loss within the current range, a resurvey for this species within the Sequatchie Valley (SV) was deemed imperative. The goal of this work was to reconnoiter additional springs and spring-fed streams that potentially contained the royal snail, and to identify large springs that might prove suitable for eventual (re-) introduction of the species.

Gordon (1991) evaluated the aquatic snail fauna of the SV and discovered the second royal snail population at Blue Hole during that comprehensive study. The present work was focused exclusively on bodies of water with the potential for harboring *Marstonia*, generally 1st-order streams and springs. Most of the springs from the Gordon report were revisited, and some additional SV springs were sampled as well. A limited number of springs proximal to, but outside, the lower SV were also inventoried for the presence of the royal snail.

No new populations were found, and at present the royal snail remains restricted to the Owen Spring and Blue Hole Spring systems in Marion County, Tennessee. The likelihood that this species occurs naturally elsewhere in the Sequatchie Valley (SV) appears minimal. However, the SV springs that were not examined during this study or the Gordon work should be reconnoitered. The USFWS is encouraged to conduct a thorough physical and chemical analysis of the two extant locations in preparation for evaluation of potential royal snail translocation sites.